## Abstract

It is possible to perform reset free operation in devices having polarization state controllers by employing specific sequences of phase shifters and couplers. In particular, sequences comprising a coupler/phase shifter/coupler or phase shifter/coupler/phase shifter formed in, for example, a semiconductor substrate, e.g. silicon substrate, are used to form the polarization state controller. A sequence functions as a quarter wave plate equivalent while two combined sequences function as a half wave plate. Control of the couplers and phase shifters of these sequences yield reset free operation.